

## REMARKS

### I. INTRODUCTION

In response to the Office Action dated August 25, 2009, which was made final, and in conjunction with a request for Continued Examination (RCE) submitted herewith, claims 1, 10-12, 16-19 have been amended, claims 21-23 have been canceled, and claims 25-34 have been added. Claims 1, 6-20, and 24-34 remain in the application. Entry of these amendments, and re-consideration of the application, as amended, is requested.

### II. NEW CLAIMS

New claims 25-34 are dependent on amended independent claim 11 and correspond to claims 6, 12-19, and 24 which depend from amended independent claim 1.

### III. NON-ART REJECTIONS

In paragraph (2) of the Office Action, claims 21-23 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention.

With regard to claim 21, the Office Action asserts that claim 21 does not clearly disclose the structure or plane for polar quantum wells.

Applicants' attorney has amended dependent claim 21 to overcome the 35 U.S.C. §112 second paragraph rejection. In addition, Applicants' attorney notes that a quantum well structure is well known in the art.

With regard to claims 22-23, Applicants' respectfully traverse these objections. However, in order to expedite prosecution, claims 22-23 have been canceled. Applicants' attorney reserves the right to present arguments to overcome these objections at a later date, if necessary.

In paragraph (3) of the Office Action, claims 18-19 were rejected because they depend on canceled claims 2 and 3, respectively. For examination, these claims were treated as being dependent on claim 1.

In response, Applicants' attorney has amended claims 18 and 19 to make them dependent on claim 1.

#### IV. PRIOR ART REJECTIONS

In paragraph (4) of the Office Action, claims 1, 6-12, 16-20, and 24 were rejected under 35 U.S.C. §103(a) as being unpatentable over Dwilinski et al., WO 03/098757 (U.S. Publication No. 2006/0138431) (Dwilinski) in view of Hata, U.S. Patent No. 6,977,953 (Hata). In paragraph (5) of the Office Action, claims 13-15 were rejected under 35 U.S.C. §103(a) as being unpatentable over Dwilinski in view of Hata and further in view of Nagahama et al., U.S. Patent No. 6,677,619 (Nagahama).

Applicants' attorney respectfully traverses these rejections in view of the amendments above. Specifically, Applicants' attorney notes that dependent claim 21 was not rejected on prior art grounds and therefore should be allowable.

Consequently, Applicants' attorney has amended independent claims 1, 10, and 11 to include the limitations of allowable dependent claim 21.

Thus, Applicants' attorney submits that amended independent claims 1, 10, and 11 are allowable over Dwilinski, Hata, and Nagahama. Further, dependent claims 6-9, 12-19, and 24-34 are submitted to be allowable over Dwilinski, Hata, and Nagahama in the same manner, because they are dependent on independent claims 1, 10, and 11, respectively, and because they contain all the limitations of the independent claims. In addition, dependent claims 6-9, 12-19, and 24-34 recite additional novel elements not shown by Dwilinski, Hata, and Nagahama.

#### V. CONCLUSION

In view of the above, it is submitted that this application is now in good order for allowance and such allowance is respectfully solicited. Should the Examiner believe minor matters still remain that can be resolved in a telephone interview, the Examiner is urged to call Applicants' undersigned attorney.

Please consider this a PETITION FOR EXTENSION OF TIME for a sufficient number of months to enter these papers, if appropriate. Please charge all fees to Deposit Account No. 50-0494 of Gates & Cooper LLP.

Respectfully submitted,

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